

IN THE CLAIMS:

Amend the claims as follows.

Claims 1-22 (Canceled)

23. (new) The peptide consisting of an amino acid sequence selected from the group consisting of:

IPKPQRKTK (SEQ ID NO 181),
PKPQRKTKR (SEQ ID NO 182),
KPQRKTKRN (SEQ ID NO 183),
PQRKTKRNT (SEQ ID NO 184),
QRKTKRNTN (SEQ ID NO 185),
RKTKRNTNR (SEQ ID NO 186),
KTKRNTNRR (SEQ ID NO 187),
TKRNTNRRP (SEQ ID NO 188),
RRPQDVKFP (SEQ ID NO 194),
RPQDVKFPG (SEQ ID NO 195),
PQDVKFPGG (SEQ ID NO 196),
QDVKFPGGG (SEQ ID NO 197),
DVKFPGGGQ (SEQ ID NO 199),
GGVYLLPRR (SEQ ID NO 209),
GVYLLPRRG (SEQ ID NO 210),
VYLLPRRG (SEQ ID NO 211),
YLLPRRGPR (SEQ ID NO 212),
LLPRRG (SEQ ID NO 213),
LPRRG (SEQ ID NO 214),
PRRG (SEQ ID NO 215),
GPR (SEQ ID NO 218),
PRL (SEQ ID NO 219),
RL (SEQ ID NO 220),
ERSQPRGRR (SEQ ID NO 231),
RSQPRGRRQ (SEQ ID NO 232),
SQPRGRRQP (SEQ ID NO 233),
RGRRQPIPK (SEQ ID NO 236),
GRRQPIPKV (SEQ ID NO 237),

RRQPIPKVR (SEQ ID NO 238),
PIPKVRRPE (SEQ ID NO 241),
PEGRTWAQP (SEQ ID NO 248),
EGRTWAQPG (SEQ ID NO 249),
GRTWAQPGY (SEQ ID NO 250),
RTWAQPGYP (SEQ ID NO 251),
TWAQPGYPW (SEQ ID NO 252),
WAQPGYPWP (SEQ ID NO 253),
AQPGYPWPL (SEQ ID NO 254),
QPGYPWPLY (SEQ ID NO 255),
LSGKPAIIP (SEQ ID NO 258),
GKPAIIPDR (SEQ ID NO 260),
PAIIPDREV (SEQ ID NO 263),
AIIPDREVL (SEQ ID NO 264),
IIPDREVLV (SEQ ID NO 265),
IPDREVLVR (SEQ ID NO 266),
PDREVLVRE (SEQ ID NO 267),
DREVLVREF (SEQ ID NO 268),
CSQHLPYIE (SEQ ID NO 281),
SQHLPYIEQ (SEQ ID NO 282),
QHLPYIEQG (SEQ ID NO 283),
HLPYIEQGM (SEQ ID NO 284),
LPYIEQGMM (SEQ ID NO 285),
PYIEQGMML (SEQ ID NO 286),
YIEQGMMML (SEQ ID NO 287),
IEQGMMMLAE (SEQ ID NO 288),
MMLAEQFKQ (SEQ ID NO 292),
MLAEQFKQK (SEQ ID NO 293),
LAEQFKQKA (SEQ ID NO 294),
AEQFKQKAL (SEQ ID NO 295),
EQFKQKALG (SEQ ID NO 296),
QFKQKALGL (SEQ ID NO 297),

FKQKALGLL (SEQ ID NO 298),
KQKALGLLQ (SEQ ID NO 299),
QKALGLLQT (SEQ ID NO 300),
KALGLLQTA (SEQ ID NO 301),
ALGLLQTAS (SEQ ID NO 302),
LGLLQTASR (SEQ ID NO 303),
GLLQTASRQ (SEQ ID NO 316),
LLQTASRQA (SEQ ID NO 317),
SVPAEILRK (SEQ ID NO 348),
VPAEILRKS (SEQ ID NO 349),
PAEILRKSR (SEQ ID NO 350),
AEILRKSRR (SEQ ID NO 351),
EILRKSRRF (SEQ ID NO 352),
FAQALPVWA (SEQ ID NO 360),
AQALPVWAR (SEQ ID NO 361),
QALPVWARP (SEQ ID NO 362),
ALPVWARPD (SEQ ID NO 363),
VWARPDYNP (SEQ ID NO 366),
WARPDYNPP (SEQ ID NO 367),
ARPDYNPPL (SEQ ID NO 368),
RPDYNPPLV (SEQ ID NO 369),
PDYNPPLVE (SEQ ID NO 370),
PPLVETWKK (SEQ ID NO 374),
PLVETWKKP (SEQ ID NO 375),
LVETWKKPD (SEQ ID NO 376),
VETWKKPDY (SEQ ID NO 377),
ETWKKPDYE (SEQ ID NO 378),
TWKKPDYEP (SEQ ID NO 379),
WKKPDYEPP (SEQ ID NO 380),
KKPDYEPPV (SEQ ID NO 381),
KPDYEPPVV (SEQ ID NO 382),
PDYEPPVVH (SEQ ID NO 383),

DYEPPVHVG (SEQ ID NO 384),
YEPPVVHGC (SEQ ID NO 385),
PPVVHGCPL (SEQ ID NO 387),
PVVHGCPLP (SEQ ID NO 388),
VVHGCPLPP (SEQ ID NO 389),
VHGCPLPPP (SEQ ID NO 390),
HGCPLPPPK (SEQ ID NO 391),
SPPVPPPRK (SEQ ID NO 400),
PQRKTK (SEQ ID NO 422),
KTKRNTN (SEQ ID NO 423),
PQDVKFP (SEQ ID NO 424),
YLLPRR (SEQ ID NO 425),
PRRGPRL (SEQ ID NO 426),
RLGVRAT (SEQ ID NO 427),
SQPRGRR (SEQ ID NO 428),
RRQPIPK (SEQ ID NO 429),
RTWAQP (SEQ ID NO 430),
QPGYPWPL (SEQ ID NO 431),
PDREVL (SEQ ID NO 432),
HLPYIE (SEQ ID NO 433),
YIEQGMMML (SEQ ID NO 434),
AEQFKQK (SEQ ID NO 435),
KQKALG (SEQ ID NO 436),
LGLLQTA (SEQ ID NO 437),
PAEILRK (SEQ ID NO 438),
EILRKSR (SEQ ID NO 439),
QALPVWA (SEQ ID NO 440),
PDYNPP (SEQ ID NO 441),
LVETWKK (SEQ ID NO 442),
DYEPPV (SEQ ID NO 443), and,
HGCPL (SEQ ID NO 444),

wherein any of said amino acids are optionally biotinylated N-terminally, C-terminally or internally, directly or through a linker Y, said linker consisting of 1 to 10 chemical entities chosen from glycine residues, beta-alanine, 4-aminobutyric acid, 5-aminovaleric acid or 6-aminohexanoic acid.

24. (new) The peptide according to claim 23 which is coupled to streptavidin or avidin, with said streptavidin or avidin optionally coupled to a solid phase.

25. (new) The peptide according to claim 23 wherein said peptide is anchored to a solid support via covalent or non-covalent bonds.

26. (new) The peptide according to claim 23, wherein said peptide is coupled via its biotin group to streptavidin present on a nylon membrane.

27. (new) A method for detecting antibodies to HCV present in a biological sample, comprising:

(i) contacting the biological sample to be analysed with a peptide according to any of claim 23 to 26, and

(ii) detecting an immune complex formed between said antibodies to HCV and said peptide to determine the presence of antibodies to HCV.

28. (new) An immunological assay kit for detecting antibodies to HCV comprising at least one peptide according to any of claims 23 to 26.

29. (new) A Line Immunoassay kit for detecting antibodies to HCV comprising at least one peptide according to any of claims 23 to 26.

30. (new) A peptide consisting of an amino acid sequence as set forth in any of SEQ ID NOs 477 to 599, and having the following chemical structure:

(A)-IPKPQRKTK-(Z) (SEQ ID NO 477)
(A)-PKPQRKTKR-(Z) (SEQ ID NO 478),
(A)-KPQRKTKRN-(Z) (SEQ ID NO 479),
(A)-PQRKTKRNT-(Z) (SEQ ID NO 480),
(A)-QRKTKRNTN-(Z) (SEQ ID NO 481),
(A)-RKTKRNTNR-(Z) (SEQ ID NO 482),
(A)-KTKRNTNRR-(Z) (SEQ ID NO 483),
(A)-TKRNTNRRP-(Z) (SEQ ID NO 484),
(A)-RRPQDVKFP-(Z) (SEQ ID NO 485),
(A)-RPQDVKFPG-(Z) (SEQ ID NO 486),
(A)-PQDVKFPGG-(Z) (SEQ ID NO 487),
(A)-QDVKFPGGG-(Z) (SEQ ID NO 488),
(A)-DVKFPGGGQ-(Z) (SEQ ID NO 489),
(A)-GGVYLLPRR-(Z) (SEQ ID NO 490),
(A)-GVYLLPRRG-(Z) (SEQ ID NO 491),
(A)-VYLLPRRGP-(Z) (SEQ ID NO 492),
(A)-YLLPRRGPR-(Z) (SEQ ID NO 493),
(A)-LLPRRGPRL-(Z) (SEQ ID NO 494),
(A)-LPRRGPRLG-(Z) (SEQ ID NO 495),
(A)-PRRGPRLGV-(Z) (SEQ ID NO 496),
(A)-GPRLGVRAT-(Z) (SEQ ID NO 497),
(A)-PRLGVRATR-(Z) (SEQ ID NO 498),
(A)-RLGVRATRK-(Z) (SEQ ID NO 499),

(A)-ERSQPRGRR-(Z) (SEQ ID NO 500),
(A)-RSQPRGRRQ-(Z) (SEQ ID NO 501),
(A)-SQPRGRRQP-(Z) (SEQ ID NO 502),
(A)-RGRRQPIPK-(Z) (SEQ ID NO 503),
(A)-GRRQPIPKV-(Z) (SEQ ID NO 504),
(A)-RRQPIPKVR-(Z) (SEQ ID NO 505),
(A)-PIPKVRRPE-(Z) (SEQ ID NO 506),
(A)-PEGRTWAQP-(Z) (SEQ ID NO 507),
(A)-EGRTWAQPG-(Z) (SEQ ID NO 508),
(A)-GRTWAQPGY-(Z) (SEQ ID NO 509),
(A)-RTWAQPGYP-(Z) (SEQ ID NO 510),
(A)-TWAQPGYPW-(Z) (SEQ ID NO 511),
(A)-WAQPGYPWP-(Z) (SEQ ID NO 512),
(A)-AQPGYPWPL-(Z) (SEQ ID NO 513),
(A)-QPGYPWPLY-(Z) (SEQ ID NO 514),
(A)-LSGKPAIIP-(Z) (SEQ ID NO 515),
(A)-GKPAIIPDR-(Z) (SEQ ID NO 516),
(A)-PAIIPDREV-(Z) (SEQ ID NO 517),
(A)-AIIPDREVL-(Z) (SEQ ID NO 518),
(A)-IIPDREVLV-(Z) (SEQ ID NO 519),
(A)-IPDREVLVYR-(Z) (SEQ ID NO 520),
(A)-PDREVLVYRE-(Z) (SEQ ID NO 521),
(A)-DREVLVYREF-(Z) (SEQ ID NO 522),

(A)-CSQHLPYIE-(Z) (SEQ ID NO 523),
(A)-SQHLPYIEQ-(Z) (SEQ ID NO 524),
(A)-QHLPYIEQG-(Z) (SEQ ID NO 525),
(A)-HLPYIEQGM-(Z) (SEQ ID NO 526),
(A)-LPYIEQGMM-(Z) (SEQ ID NO 527),
(A)-PYIEQGMML-(Z) (SEQ ID NO 528),
(A)-YIEQGMMLA-(Z) (SEQ ID NO 529),
(A)-IEQGMMLAE-(Z) (SEQ ID NO 530),
(A)-MMLAEQFKQ-(Z) (SEQ ID NO 531),
(A)-MLAEQFKQK-(Z) (SEQ ID NO 532),
(A)-LAEQFKQKA-(Z) (SEQ ID NO 533),
(A)-AEQFKQKAL-(Z) (SEQ ID NO 534),
(A)-EQFKQKALG-(Z) (SEQ ID NO 535),
(A)-QFKQKALGL-(Z) (SEQ ID NO 536),
(A)-FKQKALGLL-(Z) (SEQ ID NO 537),
(A)-KQKALGLLQ-(Z) (SEQ ID NO 538),
(A)-QKALGLLQT-(Z) (SEQ ID NO 539),
(A)-KALGLLQTA-(Z) (SEQ ID NO 540),
(A)-ALGLLQTAS-(Z) (SEQ ID NO 541),
(A)-LGLLQTASR-(Z) (SEQ ID NO 542),
(A)-GLLQTASRQ-(Z) (SEQ ID NO 543),
(A)-LLQTASRQA-(Z) (SEQ ID NO 544),
(A)-SVPAEILRK-(Z) (SEQ ID NO 545),

(A)-VPAEILRKS-(Z) (SEQ ID NO 546),
(A)-PAEILRKSR-(Z) (SEQ ID NO 547),
(A)-AEILRKSRR-(Z) (SEQ ID NO 548),
(A)-EILRKSRRF-(Z) (SEQ ID NO 549),
(A)-FAQALPVWA-(Z) (SEQ ID NO 550),
(A)-AQALPVWAR-(Z) (SEQ ID NO 551),
(A)-QALPVWARP-(Z) (SEQ ID NO 552),
(A)-ALPVWARPD-(Z) (SEQ ID NO 553),
(A)-VWARPDYNP-(Z) (SEQ ID NO 554),
(A)-WARPDYNPP-(Z) (SEQ ID NO 555),
(A)-ARPDYNPPL-(Z) (SEQ ID NO 556),
(A)-RPDYNPPLV-(Z) (SEQ ID NO 557),
(A)-PDYNPPLVE-(Z) (SEQ ID NO 558),
(A)-PPLVETWKK-(Z) (SEQ ID NO 559),
(A)-PLVETWKKP-(Z) (SEQ ID NO 560),
(A)-LVETWKKPD-(Z) (SEQ ID NO 561),
(A)-VETWKKPDY-(Z) (SEQ ID NO 562),
(A)-ETWKKPDYE-(Z) (SEQ ID NO 563),
(A)-TWKKPDYEP-(Z) (SEQ ID NO 564),
(A)-WKKPDYEPP-(Z) (SEQ ID NO 565),
(A)-KKPDYEPPV-(Z) (SEQ ID NO 566),
(A)-KPDYEPPVV-(Z) (SEQ ID NO 567),
(A)-PDYEPPVVH-(Z) (SEQ ID NO 568),

(A)-DYEPPVVHG-(Z) (SEQ ID NO 569),
(A)-YEPPVVHGC-(Z) (SEQ ID NO 570),
(A)-PPVVHGCPL-(Z) (SEQ ID NO 571),
(A)-PVVHGCPLP-(Z) (SEQ ID NO 572),
(A)-VVHGCPLPP-(Z) (SEQ ID NO 573),
(A)-VHGCPLPPP-(Z) (SEQ ID NO 574),
(A)-HGCPLPPPK-(Z) (SEQ ID NO 575),
(A)-SPPVPPPRK-(Z) (SEQ ID NO 576),
(A)-PQRKTK-(Z) (SEQ ID NO 577),
(A)-KTKRNTN-(Z) (SEQ ID NO 578),
(A)-PQDVKFP-(Z) (SEQ ID NO 579),
(A)-YLLPRR-(Z) (SEQ ID NO 580),
(A)-PRRGPRL-(Z) (SEQ ID NO 581),
(A)-RLGVRAT-(Z) (SEQ ID NO 582),
(A)-SQPRGRR-(Z) (SEQ ID NO 583),
(A)-RRQPIPK-(Z) (SEQ ID NO 584),
(A)-RTWAQP-(Z) (SEQ ID NO 585),
(A)-QPGYPWPL-(Z) (SEQ ID NO 586),
(A)-PDREVL-(Z) (SEQ ID NO 587),
(A)-HLPYIE-(Z) (SEQ ID NO 588),
(A)-YIEQGMML-(Z) (SEQ ID NO 589),
(A)-AEQFKQK-(Z) (SEQ ID NO 590),
(A)-KQKALG-(Z) (SEQ ID NO 591),

(A)-LGLLQTA-(Z) (SEQ ID NO 592),
(A)-PAEILRK-(Z) (SEQ ID NO 593),
(A)-EILRKSR-(Z) (SEQ ID NO 594),
(A)-QALPVWA-(Z) (SEQ ID NO 595),
(A)-PDYNPP-(Z) (SEQ ID NO 596),
(A)-LVETWKK-(Z) (SEQ ID NO 597),
(A)-DYEPPV-(Z) (SEQ ID NO 598), or
(A)-HGCPL-(Z) (SEQ ID NO 599),

wherein A when present, represents an amino acid, amino group, or chemically modified amino terminus of the peptide, and wherein Z when present, represents an amino acid, OH-group, NH₂-group, or a linkage involving these two groups, and wherein any of said amino acids are optionally biotinylated N-terminally, C-terminally or internally, directly or through a linker Y, said linker consisting of 1 to 10 chemical entities chosen from glycine residues, beta-alanine, 4-aminobutyric acid, 5-aminovaleric acid or 6-aminohexanoic acid, or peptides derived from said chemical structure which comprise a fragment which is immunologically reactive with HCV antisera.

31. (new) The peptide according to claim 30 which is coupled to streptavidin or avidin, with said streptavidin or avidin optionally coupled to a solid phase.

32. (new) The peptide according to claim 30 wherein said peptide is anchored to a solid support via covalent or non-covalent bonds.

33. (new) The peptide according to claim 30, wherein said peptide is coupled via its biotin group to streptavidin present on a nylon membrane.

34. (new) A method for detecting antibodies to HCV present in a biological sample, comprising:

(i) contacting the biological sample to be analysed with a peptide according to any of claim 30 to 33, and

(ii) detecting an immune complex formed between said antibodies to HCV and said peptide to determine the presence of antibodies to HCV.

35. (new) An immunological assay kit for detecting antibodies to HCV comprising at least one peptide according to any of claims 30 to 33.

36. (new) A Line Immunoassay kit for detecting antibodies to HCV comprising at least one peptide according to any of claims 30 to 33.